

UNINTENTIONAL INJURY IN SAN DIEGO COUNTY



JUNE 2012

COUNTY OF SAN DIEGO
 **HHSA**
HEALTH AND HUMAN SERVICES AGENCY



Unintentional Injury in San Diego County

**County of San Diego
Health and Human Services Agency
Public Health Services**

June 2012

For additional information, contact:

Community Health Statistics Unit
6255 Mission Gorge Road
San Diego, CA 92120
(619) 285-6479

www.SDHealthStatistics.com



Unintentional Injury in San Diego County

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RON ROBERTS

CHAIRMAN
SUPERVISOR, FOURTH DISTRICT
SAN DIEGO COUNTY BOARD OF SUPERVISORS

June 4, 2012

Dear San Diego County Residents,

I am delighted to present the enclosed report, "Unintentional Injury in San Diego County," describing the causes and costs of this problem in our region. Some people confuse unintentional injuries with "accidents." They are actually quite different. These injuries are predictable and preventable. This report details how San Diegans can make changes to reduce their numbers or even eliminate them from happening.

In San Diego County, unintentional injuries were the sixth leading cause of death in 2009. Nearly 1,000 people died of these injuries that year, with 30 percent of those incidents attributed to poisoning (including overdose). Stunningly, these preventable tragedies account for more years of potential life lost before age 65 than cancer, heart disease or any other cause of death. The economic cost in medical care and lost productivity for deaths alone is staggering, totaling more than \$85 billion nationally and \$8.5 billion in California each year. Yet injury deaths are only part of the picture. Every hour in San Diego, an average of 19 people are hospitalized or treated in an emergency department because of unintended injuries. The human suffering due to unintentional injuries can cause grave disability, pain and suffering by both those effected directly and indirectly.

On July 13, 2010, the Board of Supervisors embarked on a 10-year Health Strategy Agenda entitled "*Live Well, San Diego!*" to guide County services in support of Building Better Health. Our vision is of a San Diego County that is healthy, safe and thriving. The prevention of unintended injuries is part of that vision.

The "Unintentional Injury in San Diego County" report will serve as a useful resource for individuals, families, employers, healthcare providers, and public and private organizations in communities across our region. We all should strive to live safely and reduce the risk of unintended injury.

Sincerely,

RON ROBERTS
Chairman
County Board of Supervisors



NICK MACCHIONE, FACHE
DIRECTOR

DEAN ARABATZIS
CHIEF OPERATIONS OFFICER

County of San Diego

HEALTH AND HUMAN SERVICES AGENCY

1700 PACIFIC HIGHWAY, SAN DIEGO, CA 92101-2417
(619) 515-6555 • FAX (619) 515-6556

June 1, 2012

Dear San Diegans,

We are pleased to have prepared this report entitled, "Unintended Injury in San Diego County." This detailed evaluation of falls, motor vehicle crashes, poisonings, and all other events leading to unintended injury demonstrates the significant impact these injuries have on San Diegans of all ages. Unintended injury deaths are responsible for more years of potential life lost before age 65 years than cancer, heart disease, or any other cause of death, yet the rates of injury increase dramatically for people over 65 resulting not just in death, but also in disability, chronic pain, and loss of independence.

Although the overall rate of unintended injuries increased slightly between 2000 and 2009 in San Diego, the truth is that these injuries can be completely avoided. They are predictable and preventable. This report describes the concrete steps that can be made to reduce and even eliminate the risks for each potential cause of injury.

The Health and Human Services Agency is currently involved in a three phase initiative called *Live Well, San Diego!* that will advance the health and well-being of San Diegans over a ten year period. The three phases of the initiative are *Building Better Health*, *Living Safely*, and *Thriving*. Eliminating risk from unintentional injury is currently an important focus of the Agency's services, but as current planning progresses for the second phase, *Living Safely*, there will be increased opportunity to improve service delivery, to promote safe choices, and to pursuing policy changes for a safer environment.

We are confident that this report and future updates on unintended injury in the county will help our communities move forward with the implementation of *Live Well, San Diego!*

NICK MACCHIONE, M.S., M.P.H., F.A.C.H.E.
Director
Health and Human Services Agency

WILMA J. WOOTEN, M.D., M.P.H.
Public Health Officer
Director, Public Health Services

June 7, 2012



To the Community of San Diego,

Safe Kids San Diego has once again partnered with the County of San Diego, Health and Human Services Agency (HHSA), Public Health Services Community Health Statistics Unit to produce an unintentional injury report for San Diego County. This reporting cycle, Safe Kids has collaborated with the HHSA Aging & Independence Services (AIS) and the Trauma Research and Education Foundation (TREF) of San Diego to produce a report that represents all members of our community. Safe Kids realizes that many children are raised and live with multiple generations of family members and wants to ensure that all family members remain safe and healthy to live well in San Diego.

Information in this report can be used in grant proposals, support a safety campaign, and among families to raise awareness of the significance of unintentional injuries. This report also provides evidence based safety strategies to prevent injuries, as well as local and state resources aimed to reduce the burden of injury on the population. These strategies and resources can be used by community groups, parents, and the general public to improve the safety of their home and community.

Unintentional injury remains a leading cause of death for children ages 0 to 14 years. However, there has been a decrease in the rate of unintentional injury in children, 6.1 per 100,000 in 2000, to 3.8 per 100,000 in 2009. The effects of safety campaigns, educational strategies, and change in parenting practices have all had a positive impact on the safety and well-being of children in our community. But there is still much work to be done!

Within the 0 to 14 year age group, certain types of injury have disproportionately affected children. These include suffocation in children birth to 1 year of age, drowning in children 2 to 4 years old, motor vehicle crashes and pedestrian deaths in school aged children. Falls continue to be the major cause of hospitalization and emergency department discharge throughout the birth to 14 year old age group. To address these types of injury, Safe Kids San Diego has several very active and effective task forces to provide community outreach, education and services.

Want to get involved? Contact the Safe Kids Coordinator to learn more about how you can participate in task forces which include drowning prevention, home safety, child passenger safety, pedestrian safety, and youth sports injury prevention. This coalition provides a grassroots and active means to collaborate with other community members and organizations committed to improving the safety of our county.

Thank you all for joining us in the effort to maintain a safe and active San Diego for children and their families.

Sincerely,

Mary Beth Moran-Coordinator

Safe Kids San Diego

mbmoran@rchsd.org

(858) 576-1700 ext. 3547

Yosina Lissebeck, Esq. -President

Safe Kids San Diego

Chair-Drowning Prevention Task Force



June 7, 2012

Trauma kills more people under the age of 44 than cancer, heart disease, AIDS or any other disease. The Trauma Research and Education Foundation (TREF) is a non-profit foundation and is the educational and research branch of the San Diego Trauma System dedicated to public education and awareness of trauma-related issues. It is supported solely by the six San Diego Trauma Centers: Palomar Medical Center, Rady Children's Hospital of San Diego, Scripps Memorial Hospital La Jolla, Scripps Mercy Hospital, Sharp Memorial Hospital, and University of California San Diego Medical Center.

This year TREF was invited to provide a letter of support to the County of San Diego Health and Human Services Agency on this report. TREF is an advocate for bringing community organizations together to create prevention programs and initiatives that reduce deaths and injuries related to preventable causes. This report certainly provides the data necessary to support that effort and impact the community.

Every four seconds someone will suffer trauma. Six minutes from now, someone in the United States will die from trauma, another will be permanently disabled. This year's report demonstrates the impact social factors, cultural factors, behavioral issues, and the use of alcohol and drugs have that may forever affect the lives of otherwise healthy and productive individuals, *and* their families.

In the United States, 16% of all distracted driving crashes involve drivers under the age of 20. TREF's Safe Teen Driving Council is a collaboration of over 35 agencies that includes law enforcement, social services agencies, MADD, and driving technology groups. The council's vision is aimed specifically at reducing teen deaths and injuries due to inexperience and poor driving choices. The council recently launched "Drive Attentively, San Diego!" a multi-tiered initiative to promote responsible driving. The goals of the initiative are to reduce the consequences of impaired and distracted driving for drivers, passengers and pedestrians.

Each year, more than 12,000 older adults in San Diego County arrive at the hospital after a fall. Countywide, fall-related injuries were the leading cause of hospitalization, followed by motor vehicle occupant, poisoning, struck by, and transport-related injuries. The San Diego County Aging and Independent Services Fall Prevention Task Force addresses fall prevention resources and activities for the citizens of this community. TREF members are actively involved in this community collaboration.

TREF's slogan is "Trauma: It's Preventable!" Evidence suggests that parents are important in prevention, and education is paramount for teens and adults of all ages. This report serves as an excellent way to educate the community. With your help we will identify the need for and implement evidence-based programs to address the multitude of trauma related issues such as: sports protection, concussion guidelines, helmet use for wheeled sports activities, work safety programs, and the use of illegal drugs and misuse of alcohol that lead to injuries from violence, car crashes, and falls.

Kathi Ayers, RN, TREF President
Kathi.Ayers@sharp.com

Jan Ferree, MA – Chair, TREF's Safe Teen Driving Council
jferree@ucsd.edu

Acknowledgements

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Beth Sise, JD, MSN, RN, CPNP, Director of Trauma Research & Injury Prevention

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Eric McDonald, MD, MPH, Deputy Public Health Officer
Marcy Metz, RN, CEN, Chief of Emergency Medical Services
Pamela B. Smith, Director of Aging & Independence Services
Ellen Schmeding, MFT, Deputy Director of Aging & Independence Services



Live Well, San Diego! Healthy, Safe and Thriving Communities



Live Well, San Diego! is an initiative that embodies a countywide effort to achieve the County vision for healthy, safe and thriving communities. This is a 10-year plan to advance the health and overall well-being of the entire region. *Live Well, San Diego!* is being built with community involvement in a phased approach. The first phase – Building Better Health – was adopted by the Board of Supervisors on July 13, 2010, and implementation is ongoing and continuous. The second phase is in the design stages, and the third phase will be initiated following its adoption.

The three phases that encompass the pillars of *Live Well, San Diego!*:

- **Building Better Health** – focuses on improving the health of residents and supporting healthy choices.
- **Living Safely** – focuses on the Agency's role in ensuring families are connected to services and vulnerable residents are protected from further harm.
- **Promoting Thriving Families** – focuses on the Agency's role in helping families become stable and independent.

Key Strategies for *Live Well, San Diego!*

Each pillar has four strategies upon which our goals and objectives will be built. These strategies are:

- **Building a Better Service Delivery System** – maximizing quality and eliminating waste in our services.
- **Supporting Positive Choices** – providing information and tools so that residents can take charge of their well-being.
- **Pursuing Policy and Environmental Changes** – making it easier for people to engage in and adopt positive behaviors.
- **Improving the Culture from Within** – recognizing the importance of the workforce in making and promoting positive choices.

The entire initiative is built on a foundation of operational excellence. The County serves the entire San Diego population, with a focus on at-risk and high-need populations. These are defined as:

General Population: The 3.1 million San Diego County residents who may benefit from a more coordinated and comprehensive prevention approach.

At-Risk Population: Those we will engage with early, proven interventions to stop problems from developing or escalating.

High-Need Population: Those already in the County system who will benefit from assistance to stabilize and achieve self-reliance.



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Executive Summary

Unintentional and Intentional Injury

Injuries are the leading cause of death among people aged 1-44 years.¹ The Centers for Disease Control and Prevention (CDC) estimates that injuries caused more than 177,000 deaths in 2009 as well as 1.7 million hospitalizations and 27 million treatments and discharges from emergency departments.² Beyond the human burden from injuries, the economic costs of medical care and lost productivity are staggering, estimated by the CDC to be \$406 billion in 2005.¹

An injury can be classified as intentional or unintentional. Intentional injuries are injuries that are caused on purpose and have violent or harmful intent. Unintentional injuries are injuries that are not caused on purpose and are free from harmful intent. Some would call unintentional injuries “accidents” but they are not because they are predictable and preventable.³

Unintentional Injury

Nationally, unintentional injuries are the leading cause of death among people aged 1-34 years.¹ Further, unintentional injuries are among the top 15 causes of death for all age groups.¹ Compared to the country and state, the rate of unintentional injury death was lower in San Diego County in 2009. The financial cost of injuries is in the hundreds of millions and includes not only the direct medical care, but also rehabilitation, loss of income, and productivity. In 2005, for death alone, unintentional injuries costs over \$84 billion, or \$715,715 per death, nationally.⁴

Unintentional Injury Age-Adjusted Death Rates*, 2009	
United States	37.7
California	29.4
San Diego County	28.9

*Rate per 100,000. Based on 2000 U.S. standard population.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics, 2012.

Injuries cost the U.S. more than \$400 billion in medical care and lost productivity each year.¹

Most injuries are unintentional and are related to incidents involving cutting/piercing, drowning/submersion, falls, fires/burns, motor vehicle crashes, natural/environmental events, overexertion, poisoning, sports/recreation, struck by events, suffocation, and transport events.²

- Cut/pierce injuries are caused by the cut or piercing of the skin by a foreign object.
- Drowning/submersion injuries are caused by respiratory impairment from submersion or immersion in liquid.²
- Fall injuries are caused by a person coming to rest inadvertently on the ground/floor or lower level.²
- Fire related/burn injuries are caused by the destruction of layers of skin due to hot surfaces or liquids, direct fire/flames, radiation, chemicals, or electricity.²
- Motor vehicle related injuries are caused by a collision between a vehicle and another vehicle, pedestrian, animal, object in the road, or stationary object, including trees and utility poles.² In this report, motor vehicle related injuries are sub-divided into injuries related to the occupant, motorcyclist, and injuries that were unspecified.
- Natural/environmental injuries are caused by exposure to unfavorable natural and environmental conditions, such as heat, cold, lightning, storms, or other natural disasters, and also include lack of food and/or water.²

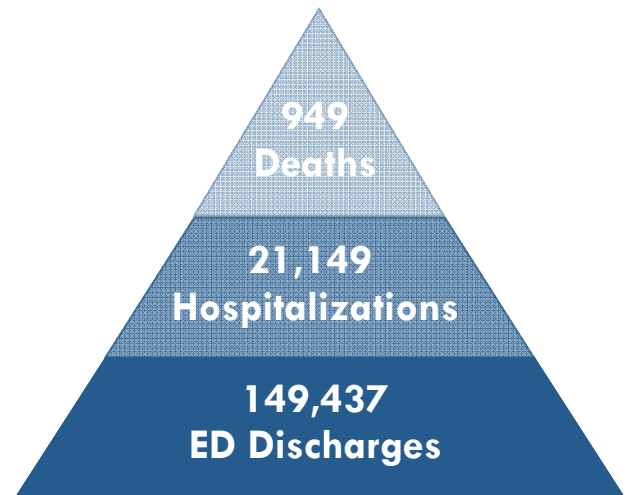
- Overexertion injuries include sprains and strains caused by lifts, carries, pulls, pushes, and other handlings that overexert the body and joints.²
- Poisoning injuries are caused by ingestion, inhalation, or absorption of substances (including medications) that are harmful to the body in large doses and include unintentional overdoses.² Intentional overdose leading to suicide, homicide, and self harm, are not included in this category.
- Sport/recreational injuries are caused by injuries that occur during sport related or recreational activities.²
- Struck by injuries are caused by bumping into, colliding with, kicking against, stepping on or being struck by any object or person, whether moving or stationary.
- Suffocation injuries are caused by respiratory impairment and can be due to plastic bags, pillows, or other objects.²
- Transport related injuries are caused by railway, water, land, and air transport incidents.

In San Diego County, unintentional injuries were the sixth leading cause of death in 2009.⁴ Poisoning (including overdose) accounted for roughly a third of all unintentional injury deaths in the county, followed by fall related, motor vehicle related, and pedestrian related injuries.⁵

Mortality data represent just a small fraction of the impact of injury on the population. For every death due to unintentional injury, there are more hospitalizations, emergency department (ED) visits, primary care treatments, and actions taken at home and work without formal medical care.

In 2009, there were 22 hospitalizations and 157 ED discharges for every death due to unintentional injury in San Diego County.

Unintentional Injury in San Diego County, 2009

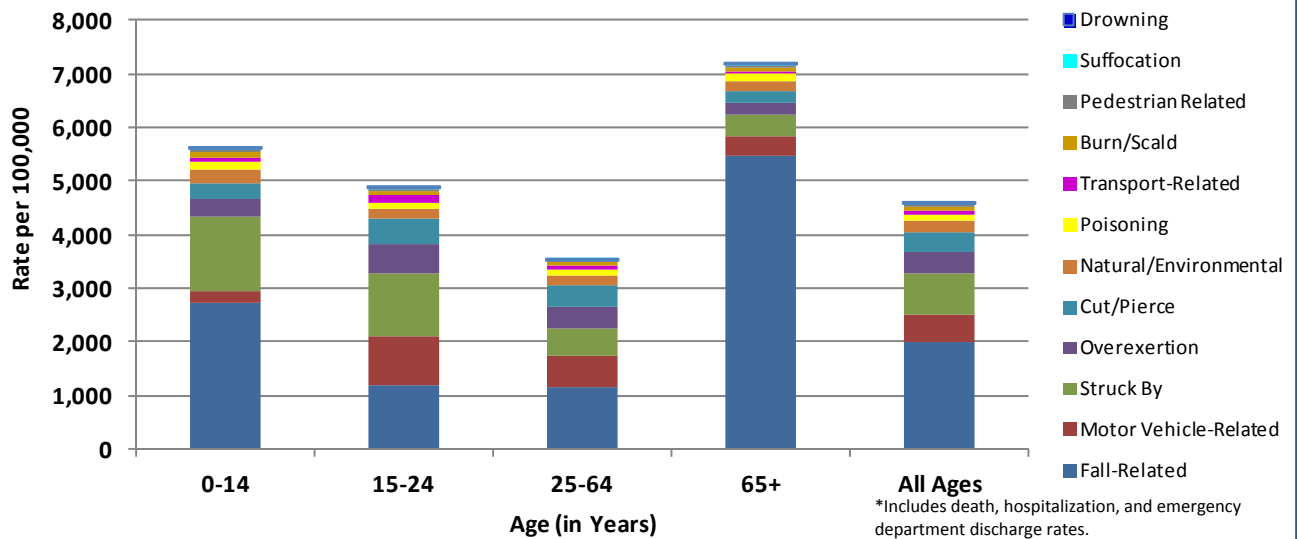


The injury pyramid above shows the total number of unintentional injury related deaths, hospitalizations, and ED discharges for San Diego County residents in 2009. Importantly, these deaths, hospitalizations, and ED discharges are separate from each other—the deaths are not a subset of hospitalizations, and the hospitalizations are not a subset of ED discharges. Clearly, the impact of unintentional injury extends beyond death—impacting health and well-being.

Unintentional injuries can cause lifelong suffering and disability, and the very young and the elderly are affected most frequently. Unintentional injuries impact every age group, but the likely causes vary substantially as people age. Many people believe that unintentional injuries happen by chance and are unavoidable. On the contrary, injuries are predictable and preventable. They are not accidents. Individual behaviors, the physical environment, the social environment, and access to care each contribute to the risk for unintentional injuries. These factors can be changed and can improve the quality of health and well-being for San Diego County residents.

Medical care and lost productivity from unintentional injury cost San Diegans \$3.4 billion in 2009.⁴

Unintentional Injury in San Diego County by Age and Type, 2009



Unintentional Injury in San Diego County

Although unintentional injury affects all ages, the risk of injury, as well as the causes of injury differ by age group.

Children aged 0-14 years were at higher risk for fall related, struck by, natural/environmental, poisoning, burn/scald, suffocation, and drowning/submersion injuries compared to the county overall in 2009.

Teens and young adults aged 15-24 years were at higher risk for motor vehicle related, struck by, overexertion, cut/pierce, transport related, and pedestrian related injuries in 2009.

Compared to the county overall, adults aged 25-64 years were at increased risk for motor vehicle related, overexertion, and cut/pierce injuries.

Lastly, adults aged 65 years and over were at higher risk for fall related, poisoning, pedestrian related, and suffocation.

Unintentional Injury Death

In 2009, the rate of death due to unintentional injury among San Diego County residents was 29.8 per 100,000. From 2000 to 2009 the rate of unintentional injury death has fluctuated, but appears to be trending upward.

- Compared to females, males had a higher risk of unintentional injury death in 2009.
- Whites had the highest rate of death compared to other racial/ethnic groups in the county.
- Residents aged 65 and over had the highest rate of death compared to other age groups in San Diego County.

Poisoning (including overdose) was the leading cause of death, followed by fall related, motor vehicle related, and pedestrian related injuries.

There were differences in the top causes of death by age:

- Drowning/submersions and suffocation were the leading causes of death for 0-14 year olds.
- Unspecified motor vehicle and poisoning were the leading causes for 15-64 year olds.
- Fall related and pedestrian injuries were the leading causes of death for 65+ year olds.

Unintentional Injury Hospitalization

In 2009, there were 21,149 hospitalizations due to unintentional injuries among San Diego County residents. The rate of unintentional injury hospitalization has fluctuated from 2000 to 2009, but appears to be trending upward.

- Compared to females, males had a slightly higher risk of unintentional injury hospitalization in 2009.
- Whites had the highest rate of hospitalization compared to other racial/ethnic groups in 2009.
- Residents aged 65 and over had the highest rate of hospitalization compared to other age groups in the county in 2009.

Fall related injuries were the leading cause of hospitalization, followed by motor vehicle occupant, poisoning, struck by, and transport related injuries.



**Every child safety seat
saves \$85 in direct
medical costs and
\$1,275 in other costs.⁷**

There were differences in the top causes of hospitalization by age. Fall related and struck by injuries were the leading causes of hospitalization for 0-14 year olds, while motor vehicle occupant and fall related injuries were the leading causes for 15-64 year olds and fall related and poisoning injuries for 65+ year olds.

Unintentional Injury Emergency Department (ED) Discharge

A total of 149,437, or 4691.2 per 100,000, San Diego County residents were treated and discharged from the ED due to unintentional injuries in 2009. The rate of unintentional injury ED discharge has decreased from 2006 to 2009.

- Compared to females, males had a higher risk of unintentional injury hospitalization in 2009.
- Blacks had the highest rate of ED discharge compared to other racial/ethnic groups in 2009.
- Children aged 0-14 had the highest rate of ED discharge compared to other age groups in the county in 2009.

Fall related injuries were the leading cause of ED discharge, followed by struck by, overexertion, motor vehicle occupant, and cut/pierce injuries. Unlike death and hospitalization, the top two leading causes of ED discharge were fall related and struck by injuries for all ages combined.

Goal of Report

Unintentional injuries affect the health and well being of San Diego County residents. Most injuries are preventable with environmental and behavioral changes. This report describes the burden of unintentional injuries, identifies leading causes of these injuries, and outlines prevention strategies to reduce their impact on San Diegans.

Unintentional Injury in San Diego County

Leading Causes of Unintentional Injury Death in San Diego County

In 2009, the leading causes of death due to unintentional injury were poisoning, followed by fall related, motor vehicle (unspecified), pedestrian related, and motor vehicle occupant injuries. However, there were differences by age. Among the 0-14 year age group, drowning/submersions were the leading cause of death, while motor vehicle (unspecified) injuries among 15-24 year olds, poisoning injuries among 25-64 year olds, and fall related injuries among 65+ year olds were the leading causes of death.

Leading Causes of Death Due to Unintentional Injury [†] in San Diego County, 2009					
Rank	Age Group				Total
	0-14 Years	15-24 Years	25-64 Years	65+ Years	
1	Drowning/ Submersion 5	Motor Vehicle - Unspecified 28	Poisoning 285	Fall Related 194	Poisoning 314
2	Suffocation 4	Poisoning 20	Motor Vehicle - Unspecified 44	Pedestrian Related 19	Fall Related 231
3	Pedestrian Related* 3	Motor Vehicle Occupant 18	Pedestrian Related 40	Motor Vehicle - Unspecified 17	Motor Vehicle - Unspecified 93
4	Transport - Other* 3	Motor Vehicle - Motorcyclist 9	Fall Related 36	Suffocation 13	Pedestrian Related 67
5	Motor Vehicle Occupant 2	Pedestrian Related 5	Motor Vehicle - Motorcyclist 26	Poisoning 9	Motor Vehicle Occupant 45

Source: California Department of Public Health, EPIC Branch, Vital Statistics Death Statistical Master File, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of deaths in each category.

*Indicates a tie.

†Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Unintentional Injury in San Diego County

Leading Causes of Unintentional Injury Hospitalization in San Diego County

Hospitalization is the admission to and treatment in a hospital. In 2009, the leading causes of hospitalization due to unintentional injury were fall related, motor vehicle occupant, poisoning, struck by, and transport related injuries. Fall related injuries were the leading cause of hospitalization due to unintentional injury for the 0-14 year, 25-64 year, and 65+ year age groups. Among the 15-24 year age group, motor vehicle occupant injuries were the leading cause of hospitalization due to unintentional injury.

Executive Summary

Leading Causes of Hospitalization Due to Unintentional Injury [†] in San Diego County, 2009					
Rank	Age Group				Total
	0-14 Years	15-24 Years	25-64 Years	65+ Years	
1	Fall Related 470	Motor Vehicle Occupant 422	Fall Related 2802	Fall Related 6826	Fall Related 10459
2	Struck by Object 86	Fall Related 361	Motor Vehicle Occupant 874	Poisoning 284	Motor Vehicle Occupant 1566
3	Burn/Scald 69	Transport - Other 138	Poisoning 623	Motor Vehicle Occupant 232	Poisoning 1032
4	Poisoning 52	Struck by Object 120	Motor Vehicle - Motorcyclist 371	Struck by Object 148	Struck by Object 626
5	Natural/Environmental 49	Motor Vehicle - Motorcyclist 109	Transport - Other 312	Natural/Environmental 137	Transport - Other 540

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of hospitalizations in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Emergency Department Discharge in San Diego County

Emergency department (ED) discharge is the treatment in an emergency department and then release. Deaths in the ED, admission to the hospital from the ED, and transfers to another hospital are not included. In 2009, the leading causes of ED discharge due to unintentional injury were fall related, struck by, overexertion, motor vehicle occupant, and cut/pierce injuries. Fall related injuries were the leading cause of ED discharge due to unintentional injury for the 0-14 year, 25-64 year, and 65+ year age groups. Among the 15-24 year age group, struck by injuries were the leading cause of ED discharge due to unintentional injury.

Leading Causes of ED Discharge Due to Unintentional Injury [†] in San Diego County, 2009					
Rank	Age Group				Total
	0-14 Years	15-24 Years	25-64 Years	65+ Years	
1	Fall Related 16944	Struck by Object 5567	Fall Related 16659	Fall Related 13156	Fall Related 52238
2	Struck by Object 8653	Fall Related 5524	Struck by Object 7900	Struck by Object 1266	Struck by Object 23386
3	Overexertion 2112	Motor Vehicle Occupant 3339	Motor Vehicle Occupant 6935	Motor Vehicle Occupant 898	Overexertion 12407
4	Cut/Pierce 1806	Overexertion 2713	Overexertion 6856	Cut/Pierce 789	Motor Vehicle Occupant 12238
5	Natural/ Environmental 1715	Cut/Pierce 2309	Cut/Pierce 6412	Overexertion 726	Cut/Pierce 11316

Source: HASD&IC, CHIP, COSD HHSA PHS EMS ED Database, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of ED discharges in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Unintentional Injury in San Diego County

Unintentional Injury Death* in San Diego County by Age and Type, 2009

Rate per 100,000

Type of Unintentional Injury	0-14 Years		15-24 Years		25-64 Years		65+ Years		All Ages	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Fall-Related Injury	<5	§	<5	§	36	2.1	194	52.7	231	7.3
Motor Vehicle Related Injury**	7	1.1	56	11.2	93	5.5	27	7.3	183	5.7
Struck By Injury	<5	§	<5	§	<5	§	<5	§	6	0.2
Overexertion Injury	<5	§	<5	§	<5	§	<5	§	<5	§
Cut/Pierce Injury	<5	§	<5	§	<5	§	<5	§	<5	§
Natural/Environmental Injury	<5	§	<5	§	<5	§	<5	§	<5	§
Poisoning	<5	§	20	4.0	285	16.9	9	2.4	314	9.9
Transport Injury	<5	§	<5	§	15	0.9	<5	§	22	0.7
Burn/Scald Injury	<5	§	<5	§	<5	§	<5	§	7	0.2
Pedestrian Related Injury	<5	§	5	1.0	40	2.4	19	5.2	67	2.1
Suffocation	<5	§	<5	§	9	0.5	13	3.5	28	0.9
Drowning/Submersion	5	0.8	<5	§	21	1.2	5	1.4	34	1.1

Unintentional Injury Hospitalization* in San Diego County by Age and Type, 2009

Rate per 100,000

Type of Unintentional Injury	0-14 Years		15-24 Years		25-64 Years		65+ Years		All Ages	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Fall-Related Injury	470	74.1	361	72.3	2,802	166.4	6,826	185.3	10,459	328.3
Motor Vehicle Related Injury**	56	8.8	580	116.2	1,380	82.0	273	74.1	2,289	71.9
Struck By Injury	86	13.6	120	24.0	272	16.2	148	40.2	626	19.7
Overexertion Injury	18	2.8	55	11.0	181	10.8	118	32.0	372	11.7
Cut/Pierce Injury	11	1.7	46	9.2	146	8.7	43	11.7	246	7.7
Natural/Environmental Injury	49	7.7	45	9.0	229	13.6	137	37.2	460	14.4
Poisoning	52	8.2	73	14.6	623	37.0	284	77.1	1,032	32.4
Transport Injury	31	4.9	138	27.6	312	18.5	59	16.0	540	17.0
Burn/Scald Injury	69	10.9	37	7.4	153	9.1	42	11.4	301	9.4
Pedestrian Related Injury	43	6.8	66	13.2	194	11.5	64	17.4	367	11.5
Suffocation	23	3.6	<5	§	72	4.3	92	25.0	191	6.0
Drowning	23	3.6	10	2.0	12	0.7	6	1.6	51	1.6

Unintentional Injury ED Discharge* San Diego County by Age and Type, 2009

Rate per 100,000

Type of Unintentional Injury	0-14 Years		15-24 Years		25-64 Years		65+ Years		All Ages	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Fall-Related Injury	16,944	2,670.0	5,524	1,106.7	16,659	989.6	13,156	3,572.8	52,283	1,641.3
Motor Vehicle Related Injury**	1,257	198.1	4,073	816.0	8,516	505.9	1,039	282.2	14,885	467.3
Struck By Injury	8,653	1,363.5	5,567	1,115.3	7,900	469.3	1,266	343.8	23,386	734.1
Overexertion Injury	2,112	332.8	2,713	543.5	6,856	407.3	726	197.2	12,407	389.5
Cut/Pierce Injury	1,806	284.6	2,309	462.6	6,412	380.9	789	214.3	11,316	355.2
Natural/Environmental Injury	1,715	270.2	988	197.9	2,940	174.6	492	133.6	6,135	192.6
Poisoning	747	117.7	463	92.8	1,175	69.8	312	84.7	2,697	84.7
Transport Injury	432	68.1	538	107.8	1,055	62.7	108	29.3	2,133	67.0
Burn/Scald Injury	567	89.3	281	56.3	877	52.1	98	26.6	1,823	57.2
Pedestrian Related Injury	229	36.1	248	49.7	485	28.8	90	24.4	1,052	33.0
Suffocation	49	7.7	<5	§	20	1.2	21	5.7	93	2.9
Drowning	77	12.1	24	4.8	19	1.1	<5	§	123	3.9

Source: California Department of Public Health, EPIC Branch, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

*Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

§ Rates not calculated for fewer than five events.

**Motor vehicle related injuries include occupant, bicyclist, motorcyclist, unspecified, and other injuries.

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Introduction

Unintentional Injury in San Diego County is a report that identifies and details the leading causes of unintentional injuries among San Diego County residents from 2000 to 2009. It was prepared by the County of San Diego Health and Human Services Agency, Public Health Services (PHS) and it is designed for local agencies, organizations, groups, services, and individuals interested in improving health and reducing injuries among county residents. Prevention and intervention measures to address the burden of unintentional injury will be a critical component of the County's *Live Well, San Diego!* initiative and will lead to a healthier, safer San Diego.

Health outcome data were derived from the [San Diego County Community Profiles](#) documents produced by the PHS Community Health Statistics Unit, as well as death, hospitalization, and emergency department (ED) discharge data from the PHS Epidemiology and Immunization Services Branch and the California Department of Public Health. This information was analyzed and presented by 0-14 year, 15-24 year, 25-64 year, and 65+ year age groups.

The *Unintentional Injury in San Diego County* is a comprehensive document presenting the latest injury data among San Diego sub-populations. This report identifies leading causes of unintentional injury and serves as a starting point in developing solutions that will help lower the burden of these injuries in the County. Prevention strategies and links to related websites and other resources for further information on unintentional injuries are also provided.

For additional local health and demographic information, as well as regional and community level data, please go to www.sdhealthstatistics.com.

For more information, contact:

Alicia Sampson, Epidemiologist & Statistician
Leslie Upledger Ray, Senior Epidemiologist
County of San Diego, Community Health Statistics
at Emergency Medical Services
6255 Mission Gorge Road, San Diego, CA 92120
alicia.sampson@sdcounty.ca.gov
leslie.ray@sdcounty.ca.gov



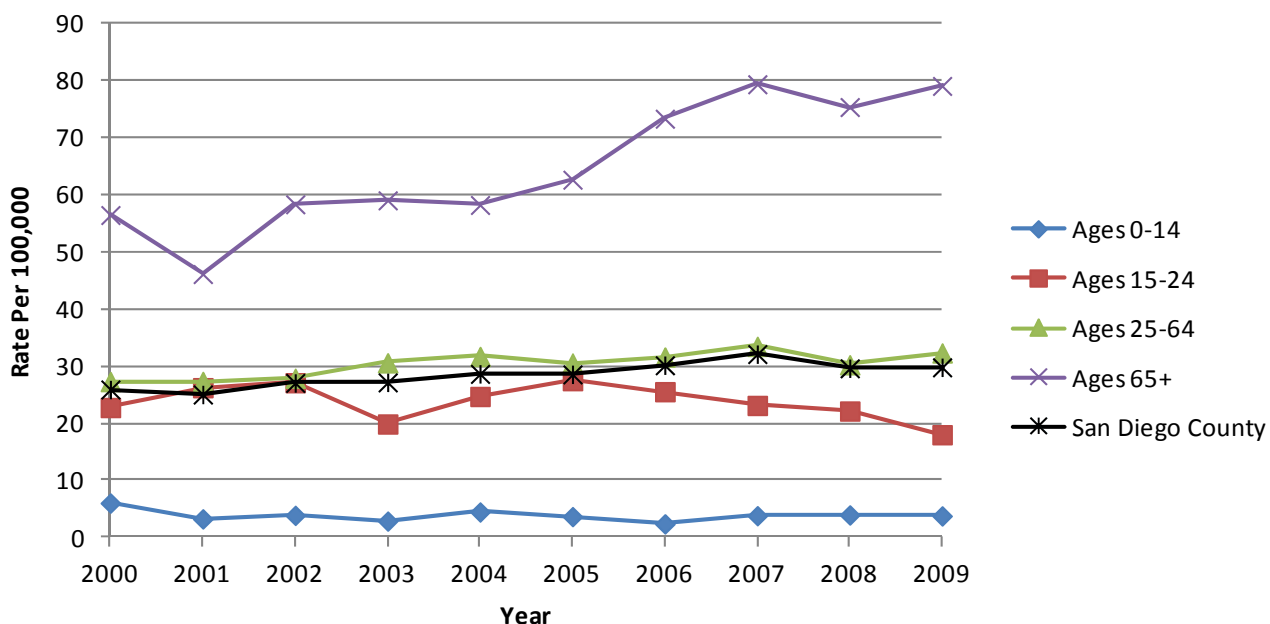
Trends in Unintentional Injury

Unintentional Injury Death in San Diego County, 2000-2009

There was a **slight increase** in the overall rate of death due to unintentional injury from 25.9 per 100,000 in 2000 to 29.8 per 100,000 in 2009. However, there were marked differences among the age groups in the death rate trends over the decade:

- For 0-14 year olds, the rate **decreased** from 6.1 per 100,000 to 3.8 per 100,000.
- For 15-24 year olds, the rate **decreased** from 22.7 per 100,000 to 18.0 per 100,000.
- For 25-64 years, the rate **increased** from 27.3 per 100,000 to 32.3 per 100,000
- For 65+ year olds, the rate **increased** from 56.4 per 100,000 to 79.0 per 100,000.

Unintentional Injury Death Rates* Among San Diego County Residents, 2000-2009



*Rates per 100,000.

† Unintentional Injury death refers to (underlying cause of death) ICD-10 codes V01-X59, Y85-Y86.

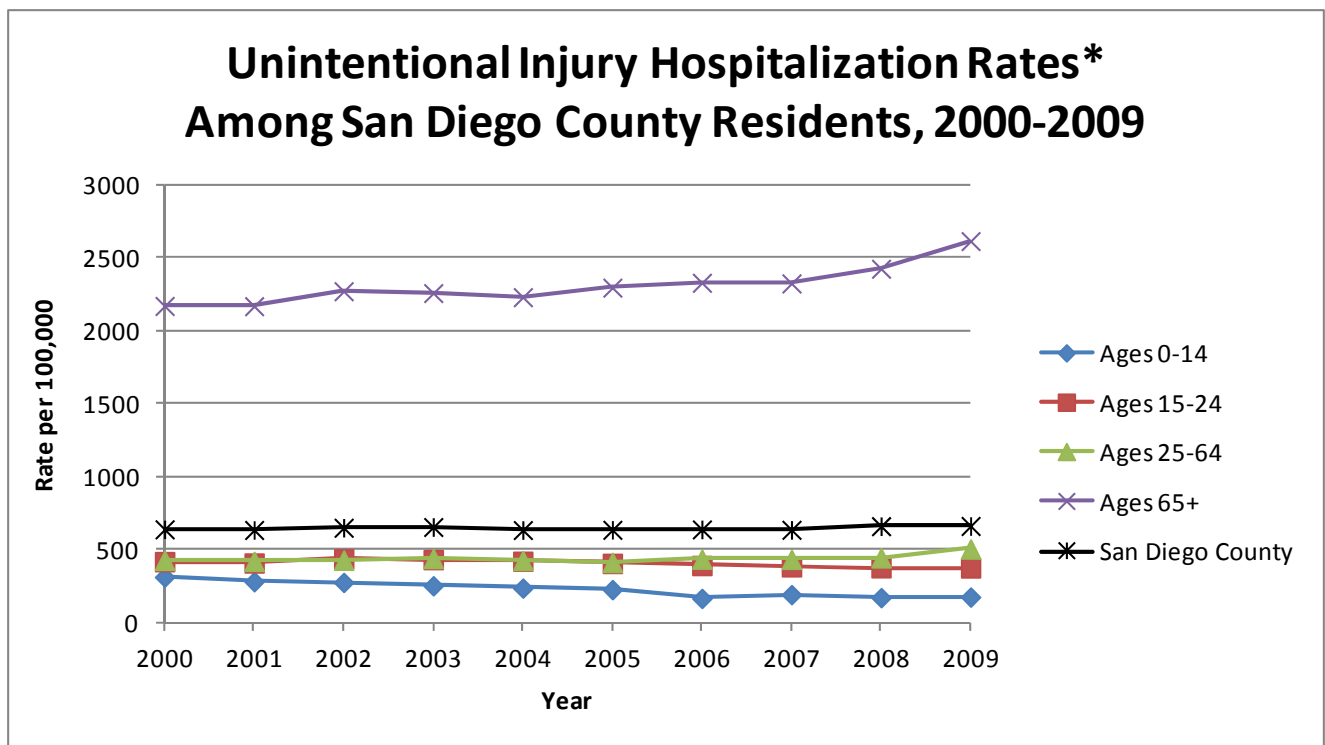
Source: Death Statistical Master Files, COSD, HHSA, PHS, EIS; SANDAG, Current Population Estimates, 10/2010.

Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Unintentional Injury Hospitalization in San Diego County, 2000-2009

There was a **slight increase** in the overall rate of hospitalization due to unintentional injury from 641.1 per 100,000 in 2000 to 663.9 per 100,000 in 2009. However, there were significant differences among the age groups in the hospitalization rate trends over the decade:

- For 0-14 year olds, the rate **decreased** from 313.9 per 100,000 to 176.8 per 100,000.
- For 15-24 year olds, the rate **decreased** from 419.8 per 100,000 to 376.8 per 100,000.
- For 25-64 year olds, the rate **increased** from 428.0 per 100,000 to 505.5 per 100,000.
- For 65+ year olds, the rate **increased** from 2172.1 per 100,000 to 2616.9 per 100,000.



*Rates per 100,000.

† Unintentional Injury hospitalization refers to (principal diagnosis) ICD-9 Ecodes E800-E869, E880-E929.

Source: Patient Discharge Data, COSD, HHSA, PHS, EIS; SANDAG, Current Population Estimates, 10/2010.

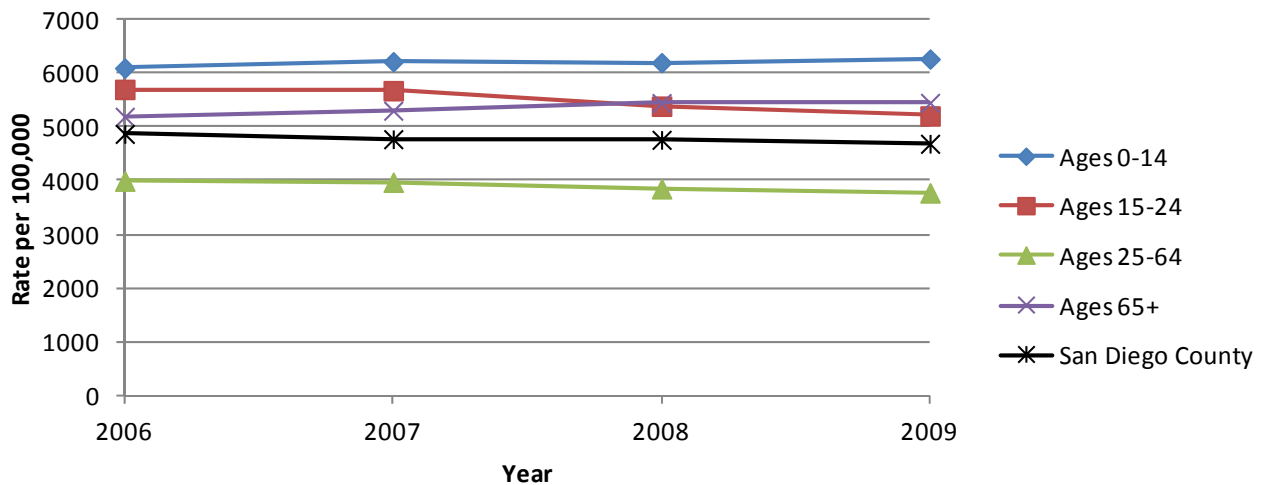
Prepared by: COSD, HHSA, PHS, EMS, 03/28/2012.

Unintentional Injury Emergency Department Discharge in San Diego County, 2006-2009**

There was a **slight decrease** in the rate of ED discharge after treatment for unintentional injury, 4,874 per 100,000 in 2006 to 4,691 per 100,000 in 2009. However, there were differences among the age groups in the trends of ED discharge rates over the four year period:

- For 0-14 year olds, the rate **increased** from 6,100 per 100,000 to 6,268 per 100,000.
- For 15-24 year olds, the rate **decreased** from 5,704 per 100,000 to 5,209 per 100,000.
- For 25-64 year olds, the rate **decreased** from 3,995 per 100,000 to 3,777 per 100,000.
- For 65+ year olds, the rate **increased** from 5,194 per 100,000 to 5,452 per 100,000.

Unintentional Injury Emergency Department Discharge Rates* Among San Diego County Residents, 2006-2009



*Rates per 100,000.

**New database; FY 2005/2006 is first full year data is available.

† Unintentional Injury emergency department discharge refers to (principal diagnosis) ICD-9 Ecodes E800-E869, E880-E929.

Source: HASD&IC, CHIP, COSD, HHSA, PHS, EMS; SANDAG, Current Population Estimates, 10/2010.

Prepared by: COSD, HHSA, PHS, EMS, 03/28/2012.

Ages 0–14

In 2009, there were an estimated 635,000 children between the ages of 0 and 14 years, representing nearly 20% of the county's population. Among children aged 0-14 years in San Diego County, injuries were a leading cause of death, the majority of which were due to unintentional injuries. In 2009, 27.5% of the 80 deaths among children aged 1-14 years were due to unintentional injuries and among children less than 1 year, unintentional injuries were 1% of the 199 deaths. Over time, the rate of unintentional injury death among 0-14 year olds has fluctuated, but has decreased from 6.1 per 100,000 in 2000 to 3.8 per 100,000 children in 2009.

In addition to death, unintentional injuries are among the top causes of hospitalization and emergency department (ED) discharge among children aged 0-14 years of age. In 2009, the rate of unintentional injury hospitalization was 176.8 per 100,000 children, while the rate of unintentional injury ED discharge was 6267.8 per 100,000 children.

- Children aged 0-14 years had the highest rate of unintentional injury ED discharge compared to other age groups in San Diego County.
- Children aged 0-14 residing in the East Region of the county had the highest rates of both unintentional injury hospitalization and ED discharge in 2009.

A child under 15 is treated in a San Diego ED for unintentional injury every 15 minutes.



Leading Causes of Unintentional Injury - Death

In 2009, there were a total of 24 unintentional injury deaths among San Diego children aged 14 years and younger. Drowning/submersions were the leading cause of unintentional injury death, followed by suffocation, pedestrian related injuries, transport injuries, and motor vehicle crash injuries.

The causes of death due to unintentional injury vary by age in the 0-14 year age group. This is demonstrated by examining the 323 deaths between 2000 and 2009 in this age group in San Diego County and noting that:

- For infant less than 1 year, suffocations and drowning/submersions were the leading causes of unintentional injury death.
- For 1-4 year olds, drowning/submersions and pedestrian related injuries were the leading causes of unintentional injury death.
- For children 5-14 years, motor vehicle crashes and pedestrian related injuries were the leading causes of unintentional injury death.

Leading Causes of Unintentional Injury - Hospitalization

In 2009, there were 1,122 children aged 0-14 years who were hospitalized as the result of an unintentional injury. Across all age groups, the leading cause of injury was falls, accounting for more than two-fifths (43%) of all hospitalizations.

- The second leading cause for infants was suffocation, while toddlers aged 1-4 years were hospitalized more often for burn/scalds.
- Struck by injuries were the second most common injury hospitalization among both 5-9 year olds and 10-14 year olds and include bumping into, colliding with, kicking against, stepping on or being struck by any object or person, whether moving or stationary.

Leading Causes of Unintentional Injury-Emergency Department Discharge

Although ED discharges for injury are typically less serious than hospitalizations, they occur more frequently. In 2009, there were a total of 39,776 children aged 14 years and younger who were treated and discharged from the ED for an injury.

- Across all age groups, the most common mechanism of injury was fall (42%), followed by struck by injuries (22%).

Within the 0-14 year age group, causes of unintentional injury varied from the very young to adolescence. To examine these differences, the 0-14 year age group has been further divided into infancy (< 1 year), early childhood (1-4), middle childhood (5-9), and early adolescence (10-14).

Infancy: 0-12 Months

Infants are particularly vulnerable to injury because they are completely reliant on adult caretakers for their safety. Their small size and lack of physical and mental development also increase injury risk and severity.



Although injury is not the leading cause of infant death in San Diego County, the rate of unintentional injury death is higher than for children of other ages. On average, the rate of unintentional injury death was 8.5 per 100,000 from 2000-2009. This is far below the national unintentional injury death rate for infants, which ranged between 23.1 and 30.7 per 100,000 over the same decade.⁹ There was an average of 4 infant deaths per year related to unintentional injury during this time period.

The leading causes of unintentional injury death among infants in San Diego County were suffocation and drowning. From 2000-2009, the rate of suffocation death among infants was 5.1 per 100,000 far lower than the national rate for suffocation death in infants which increased from 13.8 to 21.3 over the decade. The rate of drowning death was 1.8 per 100,000 in San Diego from 2000-2009, slightly higher than the national rate which averaged 1.4 per 100,000 during this period.⁹

The leading causes of unintentional injury hospitalization among infants were falls, suffocation, and burn/scalds. In 2009, 81 infants were hospitalized for unintentional injuries, for a rate of 173.4 per 100,000. Of these infants, 36 were hospitalized for a fall related injury (77.1 per 100,000).

**Every bicycle helmet
saves \$395
in direct and indirect
medical costs.⁸**

While infants were more likely to be hospitalized for their injuries than older children, there were still a significantly greater number of ED discharges for unintentional injury than hospitalizations. The most common injury types were falls, struck by injuries, burn/scalds, overexertion, and poisoning. In 2009, 1,997 infants were treated in San Diego County emergency departments for unintentional injuries, more than half of which were falls.

Injury Prevention among Infants

Suffocation, drowning, and fall related deaths are the leading causes of unintentional injury among infants. Presented below are some prevention strategies to help reduce the burden of unintentional injuries among infants 12 months and younger.

Suffocation death can be prevented by:

- Putting infants to bed in cribs that have not been recalled (www.cpsc.org), with a firm fitting mattress sheet that fits 2 inches under the mattress. Removing crib bumpers, pillows, stuffed toys, and blankets is preventive.
- Supervising children while eating, by avoiding “coin” shaped foods, sticky foods (i.e., peanut butter), whole grapes, cocktail sausages, and gum. Also, cutting food length wise (i.e., “julienne” style) to decrease the risk of choking.
- Supervising children at play and providing age-appropriate toys (watch for labels for under age 3).

Infant drowning deaths are highly preventable when utilizing prevention strategies:

- Careful caregiver supervision when bathing infants and when near bodies of water, such as pools or spas, toilets, and buckets.
- Childproofing areas of water, such as pools, with a 5 foot mesh fence, a self-latching gate, gate alarm, and a anti-entrapment filter installed.
- For outside bodies of water, locking exterior doors, and installing a door alarm is helpful.

- Emptying all bodies of water such as kiddie pools, buckets, and tubs when not in use.

Fall related injuries can be prevented by:

- Never leaving a baby unattended.
- Installing stair gates.
- Securing furniture to the wall.

Although not as common, poisoning and burn/scald deaths pose serious long-term consequences to infants.

Prevention of poisoning injury or death includes:

- Locking medications, cleaning products, pesticides, and other household chemicals in their original containers and keeping them out of sight and reach.
- Never taking medicine in front of children or referring to it as candy.
- Ensuring infants receive the proper dosage of medication for their weight—when in doubt, check with your doctor or pharmacist.

Burn and scald injuries can be prevented by:

- Checking water temperatures before placing infants in the bath.
- Lowering water heater temperatures to 120 degrees Fahrenheit.
- Using oven locks and stove knob covers.
- Keeping hot beverages and surfaces out of reach.
- Testing the temperature of warm bottles before feeding your infant.
- Educating caregivers not to drink or eat hot substances while holding a baby.

Early Childhood: 1-4 Years

Children in early childhood are developing physically and mentally. Their increasing mobility gives them a newfound independence to explore their surroundings. However, children of this age are still unable to make appropriate decisions about safety, increasing their risk of injury.

Unintentional injury is the leading cause of death in San Diego County among children 1-4 years of age. On average, the rate of injury death was 5.1 per 100,000 from 2000-2009. While it fluctuated during this time period, there was a decrease from 8.8 per 100,000 in 2000 to 5.4 per 100,000 in 2009. The unintentional injury death rate for San Diego was below the national rate in this age group. The national rate declined from 11.9 per 100,000 in 2000 to 8.6 per 100,000 in 2009.⁹

The leading causes of unintentional injury death among 1-4 year olds in San Diego County were drowning and pedestrian related injuries from 2000-2009. While the mortality rates due to injury were low when compared to morbidity rates among this age group, injury deaths are highly preventable.

The leading causes of unintentional injury hospitalization were falls, burns/scalds, and poisonings. In 2009, 393 children ages 1-4 years were hospitalized for their injuries. Of these, 169 (43%) were fall related injuries, 42 (11%) were burns/scalds, and 41 (10%) were poisonings.

The leading causes of unintentional injury ED discharge were falls, struck by, overexertion, and poisoning. In 2009, 14,938 children aged 1-4 years received treatment in an ED for their injuries. For every 12 children in this age group living in San Diego County, there was one injury related ED discharge.

Injury Prevention among 1-4 Year Olds

Among San Diego 1-4 year olds, drowning, falls, poisoning, and burns/scalds are among the top causes of unintentional injury. Presented below are some prevention strategies to help reduce the burden of unintentional injuries among 1-4 year olds.

Drowning injuries can be prevented by:

- Constant, careful caregiver supervision (within arms reach).
- Using appropriate pool safety equipment (e.g., pool fencing, self-latching gates, anti-entrapment filters, and door alarms).
- Swimming lessons for young children in addition to adult supervision. Formal swimming lessons reduce the risk of drowning by 88%.⁴
- Ensuring that children wear life jackets or proper floatation devices when boating or engaging in other water activities.

Fall related injuries can be prevented by:

- Installing stair gates.
- Keeping toys off of furniture.
- Securing furniture to the wall.
- Supervising children when at play in the home, on the playground, and in all recreational settings.
- Using absorptive ground material such as rubberized mulch for outdoor play areas.

Poisoning injuries can be prevented by:

- Using medications with child-resistant packaging.
- Keeping poisons and medications out of reach or in locked cabinets.
- Ensuring safe places for visitors/guest to store medications.

Burns and Scalds can be prevented by:

- Maintaining a lower water temperature by setting the water heater to 120 degrees Fahrenheit.
- Keeping hot objects and liquids out of the reach of children.

Middle Childhood: 5-9 Years

During middle childhood, children are developing more rapidly, becoming even more independent, often playing in groups, and as a result engaging in more risk-taking play. Further, children at this age have not yet fully developed a sense of danger and safety.

Children of this age group also do not have fully developed vision, cannot locate the distance or direction of sound, and have not mastered the ability to focus on more than one activity at a time. Thus, the rates of injury related hospitalization and ED discharge are higher than during early childhood.

Unintentional injury is among the leading causes of death in San Diego County among children 5-9 years of age. On average, the rate of injury death was 2.5 per 100,000 from 2000-2009. This was lower than the national rate for this age group from 2000-2009.⁹ The leading causes of unintentional injury death among San Diego 5-9 year-olds were motor vehicle occupant injuries and pedestrian related injuries from 2000-2009.

Falls caused 44% of unintentional injuries in 5-9 year olds discharged from San Diego EDs in 2009.

Compared to rates of hospitalization and ED discharge, unintentional injury death among children aged 5-9 years was low, however the deaths that did occur were preventable with appropriate supervision and safety equipment.

The leading causes of unintentional injury hospitalization in 2009 were falls, struck by, pedestrian related, and motor vehicle occupant, and bicyclist injuries. There were 307 children aged 5-9 years who were hospitalized due to an injury, more than half of which were fall related.



In 2009, a total of 10,490 children aged 5-9 years were treated and discharged from the ED due to an unintentional injury. The leading causes of unintentional injury ED discharge were falls, struck by, overexertion, and cut/pierce injuries.

Fall related injuries accounted for 44% of all unintentional injury ED discharges to children aged 5-9 years in 2009, at a rate of 2251.9 per 100,000. Struck by injuries were responsible for nearly 22% of all unintentional injuries to children aged 5-9 years and occurred at a rate of 1134.4 per 100,000.

Injury Prevention among 5-9 Year Olds

Falls, motor vehicle crashes, struck by, pedestrian related, and bicycle related incidents were among the top causes of injury for children aged 5-9 years in San Diego County. Presented below are some injury prevention strategies to decrease the burden of unintentional injury among children aged 5-9 years.

Fall related injuries can be prevented by:

- Supervising children when at play, whether in the home or on a playground.
- Making sure children wear protective gear, such as helmets, wrist guards, and knee and elbow pads when playing active sports.

Motor vehicle crash injuries can be prevented by:

- Using child safety/booster seats.
- Educating parents on passenger safety.
- Enforcing restraint-use laws, such as the use of booster seats for children of this age.

Struck by injuries can be prevented by:

- Wearing appropriate sports related protective gear.
- Providing safe places to play.
- Teaching children appropriate play behavior in different environments.

Pedestrian related injuries can be prevented by:

- Supervising children as they walk to and from school.
- Modeling safe pedestrian behaviors such as looking both ways when crossing the street.



Bicycle related injuries can be prevented by:

- Making sure children wear helmets.
- Ensuring children have effective bike handling skills, and are riding a bike in good condition.
- Supervising children when while bike riding, avoiding roads with speed limits over 20 mph, and preferably, riding in designated bike paths.
- Teaching children bicycle safety rules.
- Modeling safe bicycle behaviors.

Early Adolescence: 10-14 Years

During early adolescence, children strive for independence and control. They often receive less adult supervision and are influenced heavily by peers. This puts them at greater risk for injury as they engage in more risk-taking behaviors.

Unintentional injury is among the leading causes of death among early adolescents aged 10-14 years in San Diego County. The average rate of unintentional injury death was 2.6 per 100,000 from 2000-2009. During this period, the leading causes of unintentional injury death were motor vehicle occupant injuries and pedestrian related injuries.

In 2009, there were 310 unintentional injury hospitalizations among children aged 10-14 years. The leading causes of unintentional injury hospitalization were falls, struck by, and bicycle related. Fall related injuries accounted for 33% of all unintentional injury hospitalizations, at a rate of 50.6 per 100,000 in 2009.

In the same year, 12,530 San Diego children aged 10-14 years received treatment in an ED for an unintentional injury. The leading causes of unintentional injury ED discharge were falls, struck by, overexertion, cut/pierce and bicycle related injuries. Fall related and struck by injuries accounted for 62% of all unintentional injury ED discharges among those aged 10-14 years in San Diego County.

**San Diego ED's
treated a 10-14 year
old child every 40
minutes with an
unintentional injury in
2009.**

Injury Prevention among 10-14 Year Olds

Falls, motor vehicle crashes, struck by, bicycle related, and pedestrian related injuries are among the top causes of injury for children aged 10-14 years in San Diego County. Presented below are some injury prevention strategies to decrease the burden of unintentional injury among children of this age group.

Fall related injuries can be prevented by:

- Making sure children wear protective gear, such as helmets, wrist guards, and knee and elbow pads when playing active sports.

Motor vehicle crash injuries can be prevented by:

- Modeling and teaching safety belt use.
- Encouraging all children under the age of 13 years to sit in the back seat.
- Making sure children are in a booster seat until they are at least 4' 9" in height.



Pedestrian related injuries can be prevented by:

- Teaching children traffic skills.
- Offering safe places for them to play and walk.
- Modeling safe pedestrian behavior.
- Establishing safe routes to and from school.

Struck by injuries can be prevented by:

- Using appropriate sports related protective gear.
- Providing safe places to play.
- Teaching children appropriate play behavior in different environments.

Bicycle related injuries can be prevented by:

- Making sure children wear helmets.
- Teaching children bicycle safety rules.
- Modeling safe bicycle behaviors.

Unintentional Injury in San Diego County

Leading Causes of Unintentional Injury Death in San Diego County, Ages 0-14 Years

From 2000-2009, the leading causes of death due to unintentional injury among 0-14 year olds were drowning/submersion, pedestrian related, motor vehicle occupant, suffocation, and unspecified motor vehicle injuries. However, there were differences by age. Among the <1 year age group, suffocation was the leading cause of death, while drowning/submersion injuries among 1-4 year olds, and motor vehicle occupant injuries among 5-14 year olds were the leading causes of death.

Ages 0-14

Leading Causes of Death Due to Unintentional Injury in San Diego County Ages 0-14, 2000-2009

Rank	Age Group				Total
	<1 Year	1-4 Years	5-9 Years	10-14 Years	
1	Suffocation 22	Drowning/ Submersion 44	Motor Vehicle Occupant* 14	Motor Vehicle Occupant 15	Drowning/ Submersion 56
2	Drowning/ Submersion 8	Pedestrian Related 15	Pedestrian Related* 14	Pedestrian Related 12	Pedestrian Related 41
3	Fall Related 2	Motor Vehicle Occupant* 5	Motor Vehicle - Unspecified 9	Motor Vehicle - Unspecified 11	Motor Vehicle Occupant 35
4	Motor Vehicle Occupant* 1	Motor Vehicle - Unspecified* 5	Drowning/ Submersion* 4	Transport - Other 5	Suffocation 33
5	Transport - Other* 1	Suffocation* 5	Transport - Other* 4	Suffocation 3	Motor Vehicle - Unspecified 26
6	Poisoning* 1				

Source: California Department of Public Health, EPIC Branch, Vital Statistics Death Statistical Master File, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of deaths in each category.

*Indicates a tie.

†Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Hospitalization in San Diego County, Ages 0-14 Years

Hospitalization is the admission to and treatment in a hospital. In 2009, the leading causes of hospitalization due to unintentional injury among 0-14 year olds were fall related, struck by, burn/scald, poisoning, and natural/environmental injuries. Among all age groups of children under 15 years, the leading cause of hospitalization due to unintentional injury was fall related.

Ages 0-14

Leading Causes of Hospitalization Due to Unintentional Injury in San Diego County Ages 0-14, 2009					
Rank	Age Group				Total
	<1 Year	1-4 Years	5-9 Years	10-14 Years	
1	Fall Related 36	Fall Related 169	Fall Related 163	Fall Related 102	Fall Related 470
2	Suffocation 12	Burn/Scald 42	Struck by Object 22	Struck by Object 42	Struck by Object 86
3	Burn/Scald 11	Poisoning 41	Pedestrian Related 20	Bicyclist - Other 20	Burn/Scald 69
4	Struck by Object 3	Natural/ Environmental 23	Motor Vehicle Occupant* 19	Transport - Other 17	Poisoning 52
5	Natural/ Environmental* 2	Drowning/ Submersion* 19	Bicyclist - Other* 19	Motor Vehicle Occupant* 16	Natural/ Environmental 49
	Poisoning* 2	Struck by Object* 19			

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of hospitalizations in each category.

*Indicates a tie.

†Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Unintentional Injury in San Diego County

Leading Causes of Unintentional Injury Emergency Department Discharge in San Diego County, Ages 0-14 Years

Emergency department (ED) discharges are defined as treatment in an emergency department followed by release or discharge. Deaths in the ED, admission to the hospital from the ED, and transfers to another hospital are not included. In 2009, the leading causes of ED discharge due to unintentional injury among 0-14 year olds were fall related, struck by, overexertion, cut/pierce, and natural/environmental injuries. Fall related injuries were the leading cause of ED discharge due to unintentional injury for all age groups under age 15.

Ages 0-14

Leading Causes of ED Discharge Due to Unintentional Injury in San Diego County Ages 0-14, 2009					
Rank	Age Group				Total
	<1 Year	1-4 Years	5-9 Years	10-14 Years	
1	Fall Related 1099	Fall Related 7156	Fall Related 4548	Fall Related 4141	Fall Related 16944
2	Struck by Object 241	Struck by Object 2466	Struck by Object 2291	Struck by Object 3655	Struck by Object 8653
3	Burn/Scald 58	Overexertion 644	Natural/ Environmental 630	Overexertion 1069	Overexertion 2112
4	Overexertion* 57	Poisoning 554	Cut/Pierce 584	Cut/Pierce 659	Cut/Pierce 1806
5	Poisoning* 57	Cut/Pierce 527	Bicyclist - Other 387	Bicyclist - Other 616	Natural/ Environmental 1715

Source: HASD&IC, CHIP, COSD HHSA PHS EMS ED Database, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of ED discharges in each category.

*Indicates a tie.

†Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Ages 15-24

In 2009, there were an estimated 500,000 residents between the ages of 15 and 24, representing nearly 16% of the county population. In 2009, unintentional injuries were the leading cause of death among those aged 15-24 years in San Diego County, at a rate of 18.0 per 100,000. The rate of unintentional injury death was highest among teens and young adults in the North Inland Region.

In addition to death, unintentional injuries are among the top causes of hospitalization and emergency department (ED) discharge among teens and young adults in San Diego County.

- In 2009, the rate of unintentional injury hospitalization was 376.8 per 100,000, while the rate of unintentional injury ED discharge was 5209.1 per 100,000.
- Rates of hospitalization and ED discharge due to unintentional injury among those aged 15-24 years were highest in the East Region of the county.

Leading Causes of Unintentional Injury - Death

In 2009, there were a total of 90 unintentional injury deaths among San Diego teens and young adults aged 15-24 years. Motor vehicle related injuries were the leading cause of unintentional injury death, followed by poisoning, motor vehicle occupant injuries, motorcyclist injuries, and pedestrian related injuries.

In 2009, the rate of unintentional injury hospitalization was 376.8 per 100,000 among County 15-24 year olds.



Leading Causes of Unintentional Injury - Hospitalization

In 2009, there were 1,881 teens and young adults aged 15-24 years who were hospitalized as the result of an unintentional injury. The leading cause of injury was motor vehicle occupant injuries, accounting for one in four unintentional injury hospitalizations. The second leading cause was fall related injuries, followed by transport injuries, struck by injuries and motorcyclist injuries.

Leading Causes of Unintentional Injury - Emergency Department Discharge

Although ED discharges for injury are typically less serious than hospitalizations, they occur more frequently, especially in the 15-24 year age group. In 2009, there were a total of 26,002 teens and young adults who were treated and discharged from the ED for an injury. Among the top causes of unintentional injury ED discharge were struck by, fall related, motor vehicle occupant, overexertion, and cut/pierce injuries.

Motor vehicle crash injury rates, as well as overdose/poisoning and pedestrian injury ED rates were highest among the 15-24 year old age group in San Diego County. Notably, motor vehicle crashes pose a great risk for injury on 15-24 year olds.

- Compared to other age groups, motor vehicle crash related death, hospitalization, and ED discharge rates were the highest for San Diego residents, aged 15-24 years old.

- Rates of total injuries, alcohol-involved, and drinking driver involved motor vehicle crash injuries were the highest among this age group, as well.

Within the 15-24 year age group, causes of unintentional injury varied between late adolescence and young adulthood. To examine these differences, the 15-24 year age group has been further divided into late adolescence (15-19) and young adulthood (20-24).

Teens Ages 15-19 Years

Teenagers are becoming more responsible for themselves and their well-being between the ages of 15 and 19. They may be learning to drive, participating in extracurricular activities such as sports, and spending more time away from home. Injuries during this time can significantly impact their lifelong health and well-being. Thus, addressing the burden of unintentional injuries and prevention are extremely important for this age group.

The leading causes of unintentional injury death among teens aged 15-19 years in San Diego County were motor vehicle related injuries and poisoning in 2009. These injuries alone accounted for the majority (69%) of all unintentional injury deaths among 15-19 year olds.

In 2009, motor vehicle related and poisoning accounted for 69% of all unintentional injury deaths among 15-24 year olds in San Diego County.

The leading causes of unintentional injury hospitalization among 15-19 year olds were fall related, motor vehicle occupant, struck by, transport related, and pedestrian related injuries. In 2009, close to 800 hospitalizations among teens aged 15-19 years were caused by unintentional injuries.

While death and hospitalization due to unintentional injuries significantly impact the 15-19 year old age group, there are more ED discharges due to unintentional injuries than death and hospitalization combined. The most common injury types were struck by (26%), fall related (22%), motor vehicle occupant (11%), overexertion (11%), and cut/pierce (7%).



Injury Prevention among Teens Ages 15-19 Years

Motor vehicle related, fall related, struck by, and pedestrian injuries are among the leading causes of unintentional injury among teens aged 15-19 years in San Diego County. Some injury prevention strategies to decrease the burden of unintentional injury among the 15-19 year old age group are presented below.

Motor vehicle crash injuries can be prevented by:

- Using seat belts and enforcing seat belt laws.
- Avoiding distractions while driving, such as talking or texting on cell phones, eating, or playing with the radio.
- Avoiding nighttime driving.
- Enforcing and encouraging zero tolerance policies for underage drinking and driving.
- Parents enforcing graduated driver's license laws for new drivers.

Fall related injuries can be prevented by:

- Wearing protective gear, such as helmets, wrist guards, and knee and elbow pads when playing active sports.

Struck by injuries can be prevented by:

- Wearing appropriate sports related protective gear.
- Educating teens on environmental hazards and surroundings

Pedestrian injuries can be prevented by:

- Avoiding headphone and cell phone use while walking.
- Avoiding jaywalking and always walking in marked crosswalks.
- Following pedestrian laws and safety.
- Having adults model good pedestrian behavior.

Young Adults Ages 20-24 Years

As with 15-19 year olds, young adults between the ages of 20-24 are becoming more responsible for themselves and their well-being. They may be spending more time behind the wheel, as well as engaging in alcohol use and participating in sports related activities. Injuries during this time can also significantly impact their lifelong health and well-being. Thus, addressing the burden of unintentional injuries and prevention are extremely important for this age group, as well.

The leading causes of unintentional injury death among young adults aged 20-24 years in San Diego County were motor vehicle related injuries and poisoning in 2009. Together, these injuries accounted for three-fourths of all unintentional injury deaths among 20-24 year olds.



The leading causes of unintentional injury hospitalization among 20-24 year olds were motor vehicle occupant, fall related, motorcycle, transport related, and struck by injuries. In 2009, over 900 hospitalizations among young adults aged 20-24 years were caused by unintentional injuries.

Over 12,000 unintentional injury ED discharges occurred among the 20-24 year old age group in 2009. The most common injury types were fall related (21%), struck by (17%), motor vehicle occupant (15%), cut/pierce (11%), and overexertion injuries (10%). Among fall related injuries, 26% were caused by slips, trips, and stumbles, while another 11% were caused by steps.



Injury Prevention among Young Adults ages 20-24 Years

Motor vehicle related, fall related, and struck by injuries are among the leading causes of unintentional injury among the 20-24 year old age group in San Diego County. Presented below are some injury prevention strategies to decrease the burden of unintentional injury among 20-24 year olds.

Motor vehicle crash injuries can be prevented by:

- Using seat belts and enforcing seat belt laws.
- Avoiding distractions while driving, such as talking or texting on cell phones, eating, or playing with the radio.
- Avoiding drinking and driving.
- Obeying speed and traffic laws.

Fall related injuries can be prevented by:

- Wearing protective gear, such as helmets, wrist guards, and knee and elbow pads when playing active sports.

Struck by injuries can be prevented by:

- Wearing appropriate sports related protective gear.
- Remaining alert and aware of the surrounding environment.

In 2009, over 3,000 San Diegans aged 15-24 were treated and discharged from an ED due to motor vehicle crashes.

Leading Causes of Unintentional Injury Death in San Diego County, Ages 15-24 Years

In 2009, the leading causes of death due to unintentional injury among 15-24 year olds were unspecified motor vehicle, poisoning, motor vehicle occupant, motorcyclist, and pedestrian related injuries. Despite differences by age, unspecified motor vehicle injuries were the leading cause of unintentional injury death among both 15-19 and 20-24 year age groups.

Ages 15-24

Leading Causes of Death Due to Unintentional Injury† in San Diego County Ages 15-24, 2009			
Rank	Age Group		Total
	15-19	20-24	
1	Motor Vehicle - Unspecified 9	Motor Vehicle - Unspecified 19	Motor Vehicle - Unspecified 28
2	Motor Vehicle Occupant 5	Poisoning 16	Poisoning 20
3	Poisoning 4	Motor Vehicle Occupant 13	Motor Vehicle Occupant 18
4	Pedestrian Related 3	Motor Vehicle - Motorcyclist 7	Motor Vehicle - Motorcyclist 9
5	Motor Vehicle - Motorcyclist* 2	Drowning/Submersion* 2	Pedestrian Related 5
	Suffocation* 2	Pedestrian Related* 2	
		Transport—Other* 2	

Source: California Department of Public Health, EPIC Branch, Vital Statistics Death Statistical Master File, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of deaths in each category.

*Indicates a tie.

†Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Hospitalization in San Diego County, Ages 15-24 Years

Hospitalization is the admission and treatment in a hospital. In 2009, the leading causes of hospitalization due to unintentional injury among 15-24 year olds were motor vehicle occupant, fall related, transport related, struck by, and motorcyclist injuries. However, there were differences by age. For teens aged 15-19 years, the leading cause of unintentional injury hospitalization was fall related injuries, while motor vehicle occupant injuries was the leading cause for 20-24 year olds.

Leading Causes of Hospitalization Due to Unintentional Injury [†] in San Diego County Ages 15-24, 2009			
Rank	Age Group		Total
	15-19	20-24	
1	Fall Related 173	Motor Vehicle Occupant 258	Motor Vehicle Occupant 422
2	Motor Vehicle Occupant 164	Fall Related 188	Fall Related 361
3	Struck by Object 74	Motor Vehicle - Motorcyclist 87	Transport - Other 138
4	Transport - Other 61	Transport - Other 77	Struck by Object 120
5	Pedestrian Related 36	Struck by Object 46	Motor Vehicle - Motorcyclist 109

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of hospitalizations in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Emergency Department Discharge in San Diego County, Ages 15-24 Years

Emergency department (ED) discharges are defined as treatment in an emergency department followed by release or discharge. Deaths in the ED, admission to the hospital from the ED, and transfers to another hospital are not included. In 2009, the leading causes of ED discharge due to unintentional injury among 15-24 year olds were struck by, fall related, motor vehicle occupant, overexertion, and cut/pierce injuries. Struck by injuries were the leading cause of ED discharge due to unintentional injury for the 15-19 year age group, while fall related injuries were the leading cause for the 20-24 year age group.

Ages 15-24

Leading Causes of ED Discharge Due to Unintentional Injury [†] in San Diego County Ages 15-24, 2009			
Rank	Age Group		Total
	15-19	20-24	
1	Struck by Object 3532	Fall Related 2534	Struck by Object 5567
2	Fall Related 2990	Struck by Object 2035	Fall Related 5524
3	Motor Vehicle Occupant 1449	Motor Vehicle Occupant 1890	Motor Vehicle Occupant 3339
4	Overexertion 1445	Cut/Pierce 1333	Overexertion 2713
5	Cut/Pierce 976	Overexertion 1268	Cut/Pierce 2309

Source: HASD&IC, CHIP, COSD HHSA PHS EMS ED Database, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of ED discharges in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Ages 25-64

There were an estimated 1.6 million residents between the aged of 25-64 years, representing nearly 53% of the county population in 2009. In the same year unintentional injuries were among the leading causes of death among those aged 25-64 years in San Diego County, at a rate of 32.3 per 100,000. Those living in the Central Region were at highest risk of unintentional injury death compared to the other Regions.

Adults aged 25-64 years living in the Central Region were more likely to die from an unintentional injury than adults in any other Region.

In addition to death, unintentional injuries are among the top causes of hospitalization and emergency department (ED) discharge among adults between the ages of 25-64 years. In 2009, the rate of unintentional injury hospitalization was 505.5 per 100,000, while the rate of unintentional injury ED discharge was 3776.8 per 100,000.

- Compared to other age groups, unintentional injury ED discharge was lowest among 25-64 year olds.
- The risk of unintentional injury death was second highest among 25-64 year olds compared to other age groups.

Leading Causes of Unintentional Injury - Death

In 2009, there were a total of 544 unintentional injury deaths among San Diego adults aged 25-64 years.



Poisoning (including alcohol and drug overdose) was the leading cause of unintentional injury death, followed by unspecified motor vehicle injuries, pedestrian related injuries, fall related injuries, and motorcycle injuries.

Leading Causes of Unintentional Injury - Hospitalization

In 2009, there were 8,510 adults between the ages of 25 and 64 who were hospitalized as the result of an unintentional injury. The leading cause of injury was fall related injuries, accounting for a third of all unintentional injury hospitalizations. The second leading cause was motor vehicle occupant injuries, followed by poisoning (including alcohol and drug overdose), motorcycle injuries, and transport related injuries.

Leading Causes of Unintentional Injury – Emergency Department Discharge

In the same year, there was a total of 63,582 adults aged 25-64 years who were treated and discharged from the ED for an unintentional injury.

- Among the top causes of unintentional injury ED discharge were fall related, struck by, motor vehicle occupant, overexertion, and cut/pierce injuries.

Compared to all ages, the rate of overdose/poisoning death was 1.7 times higher among the 25-64 year olds in San Diego County. The rates of motor vehicle crash injury ED discharge and fall related hospitalization, as well as rates of total motor vehicle injuries, alcohol-involved injuries, and drinking driver injuries were second highest among this age group.

Within the 25-64 year age group, causes of unintentional injury varied. To examine these differences, this age group has been further divided into early middle age (25-44) and late middle age (45-64).

Ages 25-44 Years

Unintentional injuries were the leading cause of death among San Diego 25-44 year olds in 2009. As careers begin, workplace safety becomes ever more important, as well as motor vehicle safety. Growing family responsibilities and everyday stressors contribute to the risk of substance abuse among 25-44 year olds.

The leading causes of unintentional injury death among adults aged 25-44 years in San Diego County were poisoning (including alcohol and drug overdose) and motor vehicle related injuries in 2009.

- Together, poisoning and motor vehicle related injuries accounted for nearly 80% of all unintentional injury deaths among 25-44 year olds in San Diego County in 2009.

The leading causes of unintentional injury hospitalization among 25-44 year olds were fall related, motor vehicle occupant, motorcycle, poisoning (including alcohol and drug overdose), and transport related injuries. In 2009, more than 3,000 hospitalizations among adults aged 25-44 years were caused by unintentional injuries.

In 2009, one out of every 26 adults aged 25-44 years were treated and discharged from the ED due to unintentional injuries.

- The most common injury types were fall related (21%), struck by (14%), motor vehicle occupant (12%), overexertion (12%), and cut/pierce injuries (12%). A third of all fall injuries were caused by slips, trips, and



stumbles, while another 12% were caused by steps.

Injury Prevention among Adults ages 25-44 Years

Motor vehicle related, fall related, and poisoning (including alcohol and drug overdose) are among the leading causes of unintentional injury among adults aged 25-44 years in San Diego County. Presented below are some injury prevention strategies to decrease the burden of unintentional injury among the 25-44 year old age group.

Motor vehicle crash injuries can be prevented by:

- Using seat belts and enforcing seat belt laws.
- Avoiding distractions while driving, such as talking or texting on cell phones, eating, or playing with the radio.
- Avoiding drinking and driving.

Fall related injuries can be prevented by:

- Wearing protective gear, such as helmets, wrist guards, and knee and elbow pads when playing active sports.
- Using hand rails when walking up or down stairs.

Poisoning (including alcohol and drug overdose) injuries can be prevented by:

- Seeking help for substance abuse problems.
- Finding safe outlets to decrease stress and anxiety.
- Taking medications appropriately.

Adults Ages 45-64 Years

Unintentional injuries were the third leading cause of death among San Diego 45-64 year olds in 2009. In mid to late careers, workplace injuries and safety are a major concern for this age group. Additionally, increased stress and aging increase the risk of overdose/poisoning, as well as fall related injuries for this age group.

In 2009, the leading causes of unintentional injury death among adults aged 45-64 years in San Diego County were poisoning (including alcohol and drug overdose) and fall related injuries.

- Poisoning and fall related injuries accounted for more than two-thirds of all unintentional injury deaths among 45-64 year olds in 2009.

The leading causes of unintentional injury hospitalization among 45-64 year olds were fall related and poisoning. In 2009, over 4,500 hospitalizations among adults aged 45-64 years were caused by unintentional injuries.

Over 27,000 unintentional injury ED discharges occurred among the 45-64 year old age group in 2009.

- The most common injury types were fall related (33%), struck by (10%), motor vehicle occupant (10%), overexertion (10%), and cut/pierce injuries (9%). Among fall related injuries, 39% were caused by slips, trips, and stumbles, while another 10% were caused by falling from one level to another.



Injury Prevention among Adults ages 45-64 Years

Motor vehicle related, fall related, and poisoning are among the leading causes of unintentional injury among adults aged 45-64 years in San Diego County. The injury prevention strategies presented below can help decrease the burden of unintentional injury among 45-64 year olds.

Motor vehicle crash injuries can be prevented by:

- Using seat belts and enforcing seat belt laws.
- Avoiding distractions while driving, such as talking or texting on cell phones, eating, or playing with the radio.
- Avoiding drinking and driving.
- Reviewing prescription and over-the-counter medicines with your doctor or pharmacist to reduce side effects and interactions that might impair driving.

Fall related injuries can be prevented by:

- Wearing protective gear, such as helmets, wrist guards, and knee and elbow pads when engaging in active sports.
- Using hand rails when walking up or down stairs.
- Exercising regularly to improve balance.
- Reviewing prescription and over-the-counter medicines with your doctor or pharmacist to reduce side effects and interactions that can cause dizziness or drowsiness.

Poisoning (including alcohol and drug overdose) injuries can be prevented by:

- Seeking help for substance abuse problems.
- Finding safe outlets to decrease stress and anxiety, such as exercise or yoga.
- Taking medications appropriately.

Leading Causes of Unintentional Injury Death in San Diego County, Ages 25-64 Years

In 2009, the leading causes of death due to unintentional injury among 25-64 year olds were poisoning, unspecified motor vehicle, pedestrian related, fall related, and motorcyclist injuries. Despite differences by age, poisoning injuries were the leading cause of unintentional injury death among both 25-44 and 45-64 year olds.

Ages 25-64

Leading Causes of Death Due to Unintentional Injury† in San Diego County Ages 25-64, 2009			
Rank	Age Group		Total
	25-44	45-64	
1	Poisoning 113	Poisoning 172	Poisoning 285
2	Motor Vehicle - Unspecified 23	Fall Related 30	Motor Vehicle - Unspecified 44
3	Pedestrian Related 17	Pedestrian Related 23	Pedestrian Related 40
4	Motor Vehicle - Motorcyclist 14	Motor Vehicle - Unspecified 21	Fall Related 36
5	Motor Vehicle Occupant 12	Motor Vehicle - Motorcyclist 12	Motor Vehicle - Motorcyclist 26

Source: California Department of Public Health, EPIC Branch, Vital Statistics Death Statistical Master File, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of deaths in each category.

†Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Hospitalization in San Diego County, Ages 25-64 Years

Hospitalization is the admission and treatment in a hospital. In 2009, the leading causes of hospitalization due to unintentional injury among 25-64 year olds were fall related, motor vehicle occupant, poisoning, motorcyclist, and transport related injuries. Despite differences by age, fall related injuries were the leading cause of unintentional injury hospitalization among 25-44 and 45-64 year age groups.

Ages 25-64

Leading Causes of Hospitalization Due to Unintentional Injury [†] in San Diego County Ages 25-64, 2009			
Rank	Age Group		Total
	25-44	45-64	
1	Fall Related 812	Fall Related 1990	Fall Related 2802
2	Motor Vehicle Occupant 512	Poisoning 432	Motor Vehicle Occupant 874
3	Motor Vehicle - Motorcyclist 205	Motor Vehicle Occupant 362	Poisoning 623
4	Poisoning 191	Bicyclist - Other 170	Motor Vehicle - Motorcyclist 371
5	Transport - Other 169	Motor Vehicle - Motorcyclist 166	Transport - Other 312

Source: HASD&IC, CHIP, COSD HHSA PHS EMS ED Database, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of ED discharges in each category.

*Indicates a tie.

†Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Emergency Department Discharge in San Diego County, Ages 25-64 Years

Emergency department (ED) discharges are defined as treatment in an emergency department followed by release or discharge. Deaths in the ED, admission to the hospital from the ED, and transfers to another hospital are not included. In 2009, the leading causes of ED discharge due to unintentional injury among 25-64 year olds were fall related, struck by, motor vehicle occupant, overexertion, and cut/pierce injuries. Among both 25-44 and 45-64 year age groups, the leading causes of unintentional injury ED discharge were the same.

Leading Causes of ED Discharge Due to Unintentional Injury [†] in San Diego County Ages 25-64, 2009			
Rank	Age Group		Total
	25-44	45-64	
1	Fall Related 7510	Fall Related 9149	Fall Related 16659
2	Struck by Object 5057	Struck by Object 2843	Struck by Object 7900
3	Motor Vehicle Occupant 4241	Motor Vehicle Occupant 2694	Motor Vehicle Occupant 6935
4	Overexertion 4231	Overexertion 2625	Overexertion 6856
5	Cut/Pierce 4047	Cut/Pierce 2365	Cut/Pierce 6412

Source: HASD&IC, CHIP, COSD HHSA PHS EMS ED Database, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of ED discharges in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Ages 65+

There were an estimated 368,000 residents ages 65 and over, representing almost 12% of the county population in 2009. Unintentional injuries were among the causes of death among those ages 65 and over years in San Diego County.

- Although not the leading cause of death, San Diego residents aged 65 years and over had the highest rate of unintentional injury death among all age groups, at 79.0 per 100,000 in 2009.
- Adults aged 65 years and over living in the East and North Inland Regions were at highest risk of unintentional injury death compared to the other Regions.

Falls are a major cause of unintentional injury for older San Diegans.

In addition to death, rates of unintentional injury hospitalization and emergency department (ED) discharge were high among residents aged 65 and over. In 2009, the rate of unintentional injury hospitalization was 2616.9 per 100,000, while the rate of unintentional injury ED discharge was 5452.4 per 100,000. Compared to other age groups, the rate of unintentional injury hospitalization was highest among 65+ year olds and the rate of ED discharge was second highest.

Leading Causes of Unintentional Injury - Death

In 2009, there were 291 unintentional injury deaths among San Diego adults aged 65 years and over. Fall related injuries were the leading cause of death, followed by pedestrian related, unspecified motor vehicle, suffocation, and poisoning injuries.



Leading Causes of Unintentional Injury - Hospitalization

There were 9,636 adults aged 65 years and over who were hospitalized as the result of unintentional injury in 2009. The leading cause of injury was fall related injuries, accounting for more than three-fourths of all unintentional injury hospitalizations. The second leading cause was poisoning, followed by motor vehicle occupant, struck by, and natural/environmental injuries.

Leading Causes of Unintentional Injury – Emergency Department Discharge

In the same year, there were 20,077 adults aged 65 years and over who were treated and discharged from the ED for an unintentional injury. Among the top causes of unintentional injury ED discharge were fall related, struck by, motor vehicle occupant, cut/pierce, and overexertion injuries.

Among San Diego's 65 years and over population, falls are a major concern among causes of unintentional injury. Rates of fall related death, hospitalization, and ED discharge were substantially higher among San Diego residents aged 65 years and over compared to other age groups. In addition, San Diego's older adults are at risk for more serious unintentional injuries leading to death or disability, posing a unique challenge for residents and health professionals.

Within the 65 and older age group, causes of unintentional injury varied. To further examine these differences, this age group has been divided into older adults (65-84) and oldest adults (85+).

Ages 65-84 Years

Unintentional injuries were the sixth leading cause of death among San Diego 65-84 year olds in 2009. Increasing age, osteoporosis, lack of physical activity, impaired vision, medications and environmental hazards can increase the risk of unintentional injuries for this age group.

The leading causes of unintentional injury death among adults aged 65-84 years in San Diego County were fall related and pedestrian related injuries in 2009.



- Fall related and pedestrian related injuries accounted for nearly 67% of all unintentional injury deaths among those aged 65-84 years in 2009.

The leading cases of unintentional injury hospitalization among 65-84 year olds were fall related, poisoning, motor vehicle occupant, struck by, and natural/environmental injuries. In 2009, more than 5,400 hospitalizations among adults aged 65-84 years were caused by unintentional injuries.

In 2009, an estimated 14,045 adults aged 65-84 years were treated and discharged from the ED due to unintentional injuries. The most common injury types were fall related (60%), struck by (7%), motor vehicle occupant (6%), cut/pierce (5%), and overexertion injuries (4%). Among fall related injuries, 44% were caused by slips, trips, and stumbles, while another 11% were caused by steps.

Adults Ages 85+ Years

Unintentional injuries were the eighth leading cause of death among San Diego 85+ year olds in 2009. As with the 65-84 year old population, increasing age, osteoporosis, lack of physical activity, impaired vision, medications and environmental hazards can increase the risk of unintentional injuries for this age group.

In 2009, the leading causes of unintentional injury death among adults ages 85+ years in San Diego County were fall related, unspecified motor vehicle, and suffocation injuries. Together, these injuries accounted for 87% of all unintentional injury deaths among 85+ year olds.

The leading causes of unintentional injury hospitalization among 85+ year olds were fall related, poisoning, and struck by injuries. In 2009, over 3,400 hospitalizations among adults ages 85+ years were caused by unintentional injuries.

Over 6,000 unintentional injury ED discharges occurred among the 85+ year old age group in 2009. The most common injury types were fall related (79%), struck by (5%), overexertion (2%), motor vehicle occupant (2%), and cut/pierce injuries (1%). Among fall related injuries, 43% were caused by slips, trips, and stumbles, while another 13% were caused by falling from one level to another.

Each year, more than \$28 billion is spent on direct and indirect medical costs due to falls in the United States.⁸

Injury Prevention among Adults ages 65+ Years

Fall related, poisoning, and motor vehicle related injuries are among the leading causes of unintentional injury among adults aged 65 years and over in San Diego County. The following list provides injury prevention strategies to decrease the burden of unintentional injury among 65+ year olds.

Fall related injuries can be prevented by:

- Exercising regularly to improve balance, strength and flexibility.
- Asking your doctor to conduct a fall risk assessment and treat any medical risk factors.
- Reviewing prescription and over-the-counter medicines with your doctor or pharmacist to reduce side effects and interactions that can cause dizziness or drowsiness.
- Getting your vision checked at least once a year.
- Enrolling in an evidence-based program such as “Tai Chi: Moving for Better Balance.”
- Wearing appropriate footwear (flat shoes with non-slip, thin soles)
- Making your home safer by:
 - Keeping frequently used items within easy reach.
 - Improving lighting.
 - Removing loose rugs, electrical cords, and clutter in walkways.

- Installing grab bars and non-skid mats in bathrooms.

Motor vehicle related injuries can be prevented by:

- Using seat belts and enforcing seat belt laws.
- Limiting driving during bad weather and at night.
- Having eyes checked by an eye doctor annually.
- Wearing corrective lenses as prescribed.
- Reviewing prescription and over-the-counter medicines with your doctor or pharmacist to reduce side effects and interactions that might impair driving.
- Avoiding distractions, such as talking or texting on your cell phone, eating, or listening to a loud radio while driving.

Poisoning injuries can be prevented by:

- Reading labels on medications to insure proper dosage and avoid drug interactions.
- Talking with your doctor or pharmacist to if you have questions about medication dosage.



Leading Causes of Unintentional Injury Death in San Diego County, Ages 65+ Years

In 2009, the leading causes of death due to unintentional injury among 65+ year olds fall related, pedestrian related, unspecified motor vehicle, suffocation, and poisoning injuries. Despite differences by age, fall related injuries were the leading cause of unintentional injury death among both 65-84 and 85+ year olds.

Leading Causes of Death Due to Unintentional Injury [†] in San Diego County Ages 65+, 2009			
Rank	Age Group		Total
	65-84	85+	
1	Fall Related 86	Fall Related 108	Fall Related 194
2	Pedestrian Related 15	Motor Vehicle - Unspecified 6	Pedestrian Related 19
3	Motor Vehicle - Unspecified 11	Suffocation 5	Motor Vehicle - Unspecified 17
4	Poisoning* 8	Pedestrian Related 4	Suffocation 13
5	Suffocation* 8	Drowning/Submersion 3	Poisoning 9

Source: California Department of Public Health, EPIC Branch, Vital Statistics Death Statistical Master File, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of deaths in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Hospitalization in San Diego County, Ages 65+ Years

Hospitalization is the admission and treatment in a hospital. In 2009, the leading causes of hospitalization due to unintentional injury among 65+ year olds were fall related, poisoning, motor vehicle occupant, struck by, and natural/environmental injuries. Fall related injuries were the leading cause of unintentional injury hospitalization among 65-84 and 85+ year age groups.

Ages 65+

Leading Causes of Hospitalization Due to Unintentional Injury [†] in San Diego County Ages 65+, 2009			
Rank	Age Group		Total
	65-84	85+	
1	Fall Related 3907	Fall Related 2919	Fall Related 6826
2	Poisoning 235	Poisoning 49	Poisoning 284
3	Motor Vehicle Occupant 191	Struck by Object 47	Motor Vehicle Occupant 232
4	Struck by Object 101	Motor Vehicle Occupant 41	Struck by Object 148
5	Natural/Environmental 97	Natural/Environmental 40	Natural/Environmental 137

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of hospitalizations in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Leading Causes of Unintentional Injury Emergency Department Discharge in San Diego County, Ages 65+ Years

Emergency department (ED) discharges are defined as treatment in an emergency department followed by release or discharge. Deaths in the ED, admission to the hospital from the ED, and transfers to another hospital are not included. In 2009, the leading causes of ED discharge due to unintentional injury among 65+ year olds were fall related, struck by, motor vehicle occupant, cut/pierce, and overexertion. Although the top two causes of ED discharge due to unintentional injury were the same for adults aged 65-84 and those 85 and over, the next three leading causes varied in rank order.

Ages 65+

Leading Causes of ED Discharge Due to Unintentional Injury [†] in San Diego County Ages 65+, 2009			
Rank	Age Group		Total
	65-84	85+	
1	Fall Related 8366	Fall Related 4790	Fall Related 13156
2	Struck by Object 952	Struck by Object 314	Struck by Object 1266
3	Motor Vehicle Occupant 787	Overexertion 128	Motor Vehicle Occupant 898
4	Cut/Pierce 713	Motor Vehicle Occupant 111	Cut/Pierce 789
5	Overexertion 598	Cut/Pierce 76	Overexertion 726

Source: HASD&IC, CHIP, COSD HHSA PHS EMS ED Database, 2009. Prepared by: COSD, HHSA, PHS, EMS, 03/22/2012.

Note: Leading causes are determined by the total number of ED discharges in each category.

[†]Included in this table are unintentional injuries. Cases in which the mechanism of injury was intentional or unknown are excluded.

Resources

Unintentional injuries directly and indirectly impact the health and overall well-being of San Diego County residents. These injuries can be predicted and prevented. Both local and national organizations are committed to educating and reducing the burden of unintentional injuries on our everyday lives.

Local Resources

Health and Human Services Agency (HHSA), Aging and Independence Services (AIS), County of San Diego:

Provides services to older adults, people with disabilities and their family members. Helps keep clients safe in their homes, promote healthy and vital living, and publicizes positive contributions made by older adults and persons with disabilities.

www.sdcounty.ca.gov/hhsa/programs/ais

Health and Human Services Agency (HHSA), Community Health Statistics Unit (CHSU), County of San Diego:

Provides health statistics that describe health behaviors, diseases and injuries for specific populations, health trends and comparisons to national targets.

www.SDHealthStatistics.com

Health and Human Services Agency (HHSA), Emergency Medical Services (EMS), County of San Diego:

Provides emergency department and trauma surveillance reports, along with reports on traffic related injury, fall related injury, and unintentional injury in San Diego County.

www.SanDiegoCountyEMS.com

Health and Human Services Agency (HHSA), Epidemiology and Immunization Services Branch (EIS), County of San Diego:

Provides reports and statistics related to causes of death and hospitalization in San Diego County.

www.SDEpi.org

Safe Kids San Diego:

A non-profit organization dedicated solely to preventing unintentional childhood injury in San Diego County.

www.safekidssandiego.org

San Diego Fall Prevention Task Force:

A collaboration of the County of San Diego and local community partners to educate and provide resources for seniors on preventing injuries caused by falls.

www.SanDiegoFallPrevention.org

State and National Resources

EpiCenter (EPIC) - California Injury Data Online, California Department of Public Health:

Provides death, hospitalization, and emergency department visit information on all injuries among California residents.

www.epicenter.cdph.ca.gov

Fall Prevention Center of Excellence, California Fall Prevention Consortium (CFPC):

Provides leadership, creates new knowledge, improves practice, and develops sustainable fall prevention programs.

www.stopfalls.org

National Action Plan for Child Injury Prevention, Centers for Disease Control and Prevention:

A national action plan that aims to reduce childhood injuries by raising awareness, highlighting prevention solutions, and mobilizing action through coordinated efforts.

<http://www.cdc.gov/safekid/NAP/overviews/index.html>

National Center for Injury Prevention and Control, Centers for Disease Control and Prevention:

Provides national level data and prevention strategies on injury and violence.

www.cdc.gov/injury

Safe and Active Communities (SAC), California Department of Public Health:

The State of California's organization for injury prevention efforts and education.

www.cdph.ca.gov/programs/EPIC

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